Replace the indicated claims with:

1. (Twice Amended) A structure including a carbon body comprising:

a substrate; and

a carbon body disposed on the substrate and having a plurality of continuously connected intersecting walls transverse to the substrate.

2. (Twice Amended) The structure including a carbon body according to claim 1, wherein the continuously connected intersecting walls define perimeters of openings between locations where the continuous connected intersecting walls intersect.

4. (Twice Amended) The structure including a carbon body according to claim 2, including a continuous carbon film on the substrate and only partially filling the openings.

5. (Twice Amended) The structure including a carbon body according to claim 1, wherein the carbon body has a hexagonal crystalline structure with a bottom plane parallel to the substrate.

6. (Twice Amended) The structure including a carbon body according to claim 1, wherein the continuously connected intersecting walls have an average thickness of no more than 100 nm.

7. (Twice Amended) The structure including a carbon body according to claim 1, wherein an electrical current can flow between any two points on the carbon body.

8. (Twice Amended) The structure including a carbon body according to claim 1, wherein the substrate is a glass substrate.

9. (Twice Amended) A process for producing a structure including a carbon body, the process including;

generating a plasma in a mixture of gases containing a gaseous carbon compound; and

applying a magnetic field and electromagnetic waves to the plasma to establish a resonance condition for electrons in the plasma, producing a reaction in the gaseous carbon compound and forming a carbon body on a surface of a substrate, the carbon body having a plurality of continuously connected intersecting walls transverse to the substrate.

10. (Twice Amended) The process for producing the carbon body according to claim 9, wherein the magnetic field and the electromagnetic waves advance in a direction parallel to the magnetic field, crossing the surface of the substrate.

12. (Twice Amended) The process for producing the carbon body according to claim 9, wherein the mixture of gases includes hydrogen in a concentration range from 25% to 75%.

13. (Twice Amended) The process for producing the carbon body according to claim 9, wherein the substrate is a glass substrate.

14. (Twice Amended) The process for producing the carbon body according to claim 9, wherein the substrate is heated to no more than 700°C.

15. (Twice Amended) An electric field emission electron source including:

a substrate; and

a carbon body on the substrate as an electron emitting member for emitting electrons, the carbon body comprising a plurality of continuously connected intersecting walls transverse to the substrate.

16. (Twice Amended) The electric field emission electron source according to claim 15, wherein the continuously connected intersecting walls define perimeters of openings between locations where the continuously connected intersecting walls intersect.

17. (Twice Amended) The electric field emission electron source according to claim 15, including a cathode electrode for supplying electrons to the carbon body, and an extraction electrode for generating an electric field for inducing emission of electrons from the carbon body, wherein the carbon body is positioned opposite the cathode electrode, contacting the cathode electrode, and the extraction electrode is positioned opposite the carbon body without overlapping the carbon body, when viewed in a direction transverse to the substrate.

18. (Twice Amended) The electric field emission electron source according to claim 15, including a cathode electrode for supplying electrons to the carbon body, and a backside extraction electrode, positioned at a rear side of the carbon body, for generating, from the rear side of the carbon body, an electric field for inducing emission of electrons from the carbon

body, wherein the cathode electrode is positioned opposite the backside extraction electrode, and the carbon body is positioned opposite the cathode electrode, contacting the cathode electrode.

19. (Twice Amended) The electric field emission electron source according to claim 18, wherein the cathode electrode is located only at a periphery of the carbon body.

20. (Twice Amended) The electric field emission electron source according to claim 18, wherein the cathode electrode is positioned outside the backside extraction electrode and not overlapping with the backside extraction electrode, when viewed in a direction perpendicular to the substrate.